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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/495,141	01/31/2000	Mark J. Hampden-Smith	SMP-023-2-1	4450

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05/01/2003

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EXAMINER

TALBOT, BRIAN K

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 05/01/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/495,141

Applicant(s)

HAMPDEN-SMITH ET AL.

Examiner

Brian K Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-20 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-20 and 24-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The amendment filed 2/19/03 has been considered and entered. Claims 1-11 and 21-23 have been canceled. Claims 25-38 have been added. Claims 12-20 and 24-38 remain in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. In light of the amendment filed 2/19/03, the 35 USC 102(b) rejection has been withdrawn. Also, the 35 USC 10b(e) rejection over Hampden-Smith et al. (6,193,908) or Hampden-Smith et al. (6,197,218) and the 35 USC 103 rejection including Hampden-Smith et al. (6,193,908) have been withdrawn.

Claim Rejections - 35 USC § 103

4. Claims 12-15,17-20,25-29,37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (5,644,193) in combination with Oshima et al. (5,932,139).

Matsuda et al. (5,644,193) teaches a phosphor coating for cathode ray tubes, fluorescent lamps and radiation screens. The phosphor coating suspension includes spherical particles having an average particle size of from 0.5-20 microns. The phosphor particles can be oxides or sulfide of phosphor. The coating can be applied by syringe injection.

Matsuda et al. (5,644,193) fails to teach that the phosphor particles are hollow or that the coating can be applied by ink-jet in an x-y fashion.

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Oshima et al. (5,932,139) teaches hollow phosphor particles applied by ink-jet printing.

Therefore, it would have been within the skill of one practicing in the art to have modified Matsuda et al. (5,644,193) process by forming the phosphor coating with hollow particles and applying the coating by ink-jet as evidenced by Oshima et al. (5,932,139) because of the expectation of achieving similar results.

While the Examiner acknowledges the fact that Matsuda et al. (5,644,193) in combination with Oshima et al. (5,932,139) fail to specifically teach the syringe or ink-jet coating being controllable in an x-y grid, it is the Examiner's position that this would be an inherent function of ink-jet printing and an automated syringe. It is further noted that these are the same coating techniques claimed and hence the Examiner can draw no other conclusion as to this limitation. If Applicant disagrees, Applicant is invited to supply a showing or reasonings why the claimed ink-jet and syringe are x-y controllable and that the prior art's same devices are not.

Claims 16,24,30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (5,644,193) in combination with Oshima et al. (5,932,139) further in view of Chadha (5,662,831).

Matsuda et al. (5,644,193) in combination with Oshima et al. (5,932,139) fail to teach coating being performed on a flat panel display.

Chadha (5,662,831) teaches luminescent phosphor coating on articles such as field emission displays and plasma displays and articles relating thereto (col. 1, lines 10-13 and col. 2,

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lines 40-42). Particles sizes of less than 3 microns and liquid medium including water, alcohols, etc is taught.

Therefore, it would have been obvious at the time the invention was made for one skilled in the art to have had a reasonable expectation of achieving similar success for performing the phosphor coating process of Matsuda et al. (5,644,193) in combination with Oshima et al. (5,932,139) on a FED or PDP as evidenced by Chadha (5,662,831).

Response to Amendment

5. Applicant's arguments filed 2/19/03 have been fully considered but they are not persuasive.

Applicant argued that the prior art doesn't teach coating devices being controllable in the x-y grid.

The Examiner disagrees as noted above.

Applicant argued that the prior art taught CRT tube manufacturing and not FED or PDP manufacturing with phosphor coatings.

Chadha (5,662,831) teaches FED and PDP manufacturing with phosphor coatings.

Applicant argued that the liquid medium and particles sizes are not taught.

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The Examiner disagrees. See both Matsuda et al. and Chadha (5,662,831 for these limitations.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (703) 305-3775. The examiner can normally be reached on Tuesday-Friday 6AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3775.

A handwritten signature in black ink, appearing to read "B-K Talbot", with a long, sweeping horizontal stroke extending to the right.

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT
April 28, 2003